

REMARKS

Applicants will address each of the Examiner's rejections in the order in which they appear in the Office Action.

1. Rejection of Claims 1, 13 and 31

In the Final Rejection, the Examiner rejects Claims 1, 13 and 31 under 35 USC §103(a) as being unpatentable over Hiraga et al. in view of Harrah et al. This rejection is respectfully traversed.

Hiraga discloses a film deposition apparatus comprising: a stock chamber (vacuum vessel (1)); a transferring vessel (200); and gate (air tight doors (11)). Hiraga also states "As described in the foregoing, the thin-film fabrication method and apparatus of the present invention enables thin films to be fabricated without being affected by contaminants, thereby enabling the efficient production of thin films having strong adhesion to the substrate and high durability." (col. 24, lns. 27-32 in Hiraga).

The Examiner admits that Hiraga does not teach wherein said liquid phase film deposition chamber is provided with a mechanism for oxidizing an element belonging to Group 1 or 2 of the periodic table, as required in the claims of the present application. The Examiner, however, argues that "it would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention was made to have provided a mechanism for oxidizing an element belonging to Group 1 or Group 2 of the periodic table in Hiraga et al. in order to scavenge moisture within chamber as taught by Harrah et al." Applicants disagree.

Applicants respectfully submit that a person of ordinary skill in the art upon reading Hiraga would understand that he only has to use a sealed vessel to completely remove contaminant gases.

Therefore, there is no suggestion or motivation to employ the teaching of oxidizable metal of Harrah to modify the apparatus of Hiraga. It is well established law that in order to combine references for a §103(a) rejection, there must be some suggestion or motivation in the references to combine the references. As there is none here, it would not have been obvious for a person of ordinary skill in the art at the time the invention was made to modify that which is taught in Hiraga by Harrah. Hence, the combination of references and the rejection based thereon is not proper. Accordingly, it is respectfully requested that this rejection be withdrawn.

2. Rejection of Claims 2 and 14

The Examiner also rejects Claims 2 and 14 under 35 USC §103(a) as being unpatentable over Hiraga et al. and Harrah et al. and further in view of Begin et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1 for the independent claims, dependent Claims 2 and 14 are also patentable over the cited references.

Accordingly, it is respectfully requested that this rejection be withdrawn.

3. Rejection of Claims 3 and 15

The Examiner also rejects Claims 3 and 15 under 35 USC §103(a) as being unpatentable over Hiraga et al. and Harrah et al. and further in view of Kakei et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1 for the independent claims, dependent claims 3 and 15 are also patentable over the cited references, and it is respectfully requested that this rejection be withdrawn.

4. Rejection of Claims 4 and 34

The Examiner also rejects Claims 4 and 34 under 35 USC §103(a) as being unpatentable over Hiraga et al. in view of Harrah et al. in view of Conte.

For substantially the same reasons discussed above in response to Rejection number 1, independent claim 4 is also patentable over the cited references, and it is requested that this rejection be withdrawn.

Furthermore, although Conte discloses a getter pump, claim 4 recites “wherein said liquid phase film deposition chamber is provided with, via a piping, a mechanism for oxidizing an element belonging to Group 1 or 2 of the periodic table.” This has a remarkable effect in that “a heat source does not need to be placed near the film deposition apparatus.” See e.g. p.14 lns.16-17 of the present application. Therefore, it is respectfully submitted that it would not have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Hiraga, Harrah and Conte to arrive at the present invention.

Claim 34 is patentable over the cited references for at least the above reasons cited in response to Rejection number 1.

Accordingly, it is respectfully submitted that the rejected claims are patentable over these cited

references, and it is requested that the rejection be withdrawn.

5. Rejection of Claim 5

The Examiner also rejects Claim 5 under 35 USC §103(a) as being unpatentable over Hiraga et al., Harrah et al. and Conte and further in view of Begin et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1 for the independent claims, dependent claim 5 is also patentable over the cited references, and it is requested that this rejection be withdrawn.

6. Rejection of Claim 6

The Examiner also rejects Claim 6 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al. and Conte and further in view of Kakei et al. This rejection is also respectfully traversed.

For substantially the same reasons discussed above in response to Rejection number 4, independent claim 6 is also patentable over the cited references, and it is requested that this rejection be withdrawn.

7. Rejection of Claims 7, 8, 16-17 and 37

The Examiner also rejects Claims 7-8, 16-17 and 37 under 35 USC §103 as being unpatentable over Hiraga et al. in view of Harrah et al. and in view of Begin et al. This rejection is also

respectfully traversed.

For substantially the same reasons discussed above in response to Rejection number 1, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

8. Rejection of Claims 9 and 18

The Examiner also rejects Claims 9 and 18 under 35 USC §103 as being unpatentable Hiraga et al., Harrah et al. and Begin et al. and further in view of Kakei et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1 for the independent claims, dependent claims 9 and 18 are also patentable over the cited references, and it is requested that this rejection be withdrawn.

9. Rejection of Claims 10, 11 and 40

The Examiner also rejects Claims 10, 11 and 40 under 35 §USC 103 as being unpatentable over Hiraga et al. in view of Harrah et al., in view of Begin et al. in view of Conte. This rejection is also respectfully traversed.

For substantially the same reasons discussed above in response to Rejection number 4, independent claim 10 and dependent claims 11 and 40 are also patentable over the cited references, and it is requested that this rejection be withdrawn.

10. Rejection of Claim 12

The Examiner also rejects Claim 12 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al., Begin et al. and Conte and further in view of Kakei et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 4 for the independent claims, dependent claim 12 is also patentable over the cited references, and it is requested that this rejection be withdrawn.

11. Rejection of Claims 32 and 33

The Examiner also rejects Claims 32 and 33 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al., Begin et al. and further in view of Zheng et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

12. Rejection of Claims 35 and 36

The Examiner also rejects Claims 35 and 36 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al., Conte et al. and further in view of Zheng et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 4, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

13. Rejection of Claims 38-39 and 45-46

The Examiner also rejects Claims 38-39 and 45-46 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al., Begin et al. and further in view of Zheng et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

14. Rejection of Claims 41 and 42

The Examiner also rejects Claims 41 and 42 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al., Begin et al., Conte et al. and further in view of Zheng et al. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 4, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

15. Rejection of Claims 43 and 44

The Examiner also rejects Claims 43 and 44 under 35 USC §103 as being unpatentable over Hiraga et al., Harrah et al and further in view of Zheng et al. This rejection is also respectfully

traversed.

For at least the reasons discussed above in response to Rejection number 1, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

16. Rejection of Claims 47 and 51

The Examiner also rejects Claims 47 and 51 under 35 USC §103 as being unpatentable over Hiraga and Harrah and further in view of Smithgall. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

17. Rejection of Claim 48

The Examiner also rejects Claim 48 under 35 USC §103 as being unpatentable over Hiraga and Harrah and Conte further in view of Smithgall. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 4, this claim is also patentable over the cited references, and it is requested that this rejection be withdrawn.

18. Rejection of Claims 49 and 52

The Examiner also rejects Claims 49 and 52 under 35 USC §103 as being unpatentable over Hiraga, Harrah, and Begin further in view of Smithgall. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 1, these claims are also patentable over the cited references, and it is requested that this rejection be withdrawn.

19. Rejection of Claim 50

The Examiner also rejects Claim 50 under 35 USC §103 as being unpatentable over Hiraga, Harrah and further in view of Zheng. This rejection is also respectfully traversed.

For at least the reasons discussed above in response to Rejection number 4, this claim is also patentable over the cited references, and it is requested that this rejection be withdrawn.

Conclusion


Accordingly, it is respectfully submitted that the present application is in a condition for allowance and should be allowed.

A petition for a one-month extension of time is enclosed to make the filing of this Response timely. A check is enclosed for the fee associated with this time extension.

If any additional fee is due for this response, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,



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